

Appl. No. 10/022,056

**AMENDMENTS TO CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims**

1-90. (canceled)

91. (new) A computer program product comprising:

a computer-usable medium having a computer program for transforming a source data structure to a destination data structure embodied therein, said computer program configured to: obtain a source data structure comprising a set of source tables, a set of source fields, a set of source records, a set of source table relationships, and a set of source values;

obtain transformation data comprising information associated with at least one set selected from said set of source tables, said set of source fields, said set of source records, said set of source table relationships and said set of source values;

process said source data structure by field-at-a-time handling of said set of source fields;

apply said transformation data to said at least one set selected from said set of source tables, said set of source fields, said set of source records, said set of source table relationships and said set of source values;

transform said source data structure into a destination data structure.

92. (new) The computer program product of claim 91 wherein said destination data structure comprises a database.

Appl. No. 10/022,056

93. (new) The computer program product of claim 92 wherein said database comprises catalog data.

94. (new) The computer program product of claim 92 wherein said database comprises financial data.

95. (new) The computer program product of claim 91 wherein said transformation data comprises mapping information and said computer program is configured to use said mapping information to execute a means for mapping said source data structure to said destination data structure.

96. (new) The computer program product of claim 95 wherein said mapping information is displayed to a user.

97. (new) The computer program product of claim 95 wherein said mapping information comprises field-level mapping information that identifies a correlation between at least one of said set of source fields and at least one destination field.

98. (new) The computer program product of claim 95 wherein said field-level mapping information is displayed to a user.

Appl. No. 10/022,056

99. (new) The computer program product of claim 97 wherein said at least one of said set of source fields in said field-level mapping comprises a source field combination having a plurality of source fields.

100. (new) The computer program product of claim 99 wherein said source field combinations are displayed to a user.

101. (new) The computer program product of claim 97 wherein said at least one destination field in said field-level mapping information comprises a destination field combination having a plurality of destination fields.

102. (new) The computer program product of claim 101 wherein said destination field combinations are displayed to a user.

103. (new) The computer program product of claim 97 wherein said at least one of said set of source fields in said field-level mapping information comprises a source field combination having a plurality of source fields and said at least one destination field in said field-level mapping comprises a destination field combination having a plurality of destination fields.

104. (new) The computer program product of claim 103 wherein said source field combinations and said destination field combinations are displayed to a user.

Appl. No. 10/022,056

105. (new) The computer program product of claim 97 wherein said mapping information comprises value-level mapping information that identifies a correlation between at least one of said set of source values of said at least one of said set of source fields and at least one of said set of destination values of said at least one destination field.
106. (new) The computer program product of claim 105 wherein said value-level mapping information is displayed to a user.
107. (new) The computer program product of claim 105 wherein said at least one of said set of source values in said value-level mapping comprises a source value combination having said set of source values of a plurality of said at least one of said set of source fields associated with a set of destination values of said at least one of said destination fields.
108. (new) The computer program product of claim 107 wherein said source value combinations are displayed to a user.
109. (new) The computer program product of claim 105 wherein said value-level mapping comprises a destination value combination having a plurality of said set of destination values of said at least one of said destination fields associated with a plurality of said set of source values of said at least one of said set of source fields.
110. (new) The computer program product of claim 109 wherein said destination value combinations are displayed to a user.

Appl. No. 10/022,056

111. (new) The computer program product of claim 105 wherein said set of source values of said at least one of said set of source fields in said value-level mapping comprises a source value combination having values of a plurality of said at least one of said set of source fields and said destination values of said at least one of said destination fields in said value-level mapping comprises a destination value combination having a plurality of said at least one of said destination fields.

112. (new) The computer program product of claim 111 wherein said source value combinations and said destination value combinations are displayed to a user.

113. (new) The computer program product of claim 91 wherein said transformation data comprises type information and said computer program comprises a means for converting said set of source fields from a source type to a destination type based on said type information.

114. (new) The computer program product of claim 113 wherein said type information is displayed to a user.

115. (new) The computer program product of claim 91 wherein said transformation data comprises type information for converting said set of source fields from a source type to a destination type based on said type information.

Appl. No. 10/022,056

116. (new) The computer program product of claim 91 wherein said computer program is configured to merge said set of source values of said set of source fields into source value combinations comprising a plurality of source values and convert said source value combinations into destination fields of said destination data structure.

117. (new) The computer program product of claim 116 wherein said source value combinations are displayed to a user.

118. (new) The computer program product of claim 91 wherein said computer program is configured to generate hierarchy among said set of source values of said set of source fields into source value hierarchies comprising a plurality of source values and convert said source value hierarchies into destination fields of said destination data structure.

119. (new) The computer program product of claim 118 wherein said source value hierarchies are displayed to a user.

120. (new) The computer program product of claim 91 wherein said transformation data is generated automatically.

121. (new) The computer program product of claim 91 wherein said transformation data comprises parsing information and said computer program is configured to execute a means for parsing data values from descriptive fields.

Appl. No. 10/022,056

122. (new) The computer program product of claim 91 wherein said source data structure comprises descriptive fields having data values and said computer program is configured to use said transformation data to extract said data values from said descriptive fields.

123. (new) The computer program product of claim 91 wherein said computer program is configured to generate at least one added source field in accordance with said transformation data.

124. (new) The computer program product of claim 123 wherein said added source field is displayed to a user.

125. (new) The computer program product of claim 91 wherein said computer program is configured to generate at least one cloned source field containing a copy of said set of source values in one of said set of source fields in accordance with said transformation data.

126. (new) The computer program product of claim 125 wherein said at least one cloned source field is displayed to a user.

127. (new) The computer program product of claim 125 wherein said values of said at least one cloned source field is displayed to a user.

Appl. No. 10/022,056

128. (new) The computer program product of claim 91 wherein said computer program is configured to generate at least one split-into-hierarchy source field containing a hierarchy based on said set of source values in one of said set of source fields in accordance with said transformation data.

129. (new) The computer program product of claim 128 wherein said at least one split-into-hierarchy source field is displayed to a user.

130. (new) The computer program product of claim 128 wherein said set of source values of said split-into-hierarchy source field are displayed to a user.

131. (new) The computer program product of claim 91 wherein said computer program is configured to generate at least one plurality of split-into-multiple source fields each containing components of said set of source values in one of said set of source fields in accordance with said transformation data.

132. (new) The computer program product of claim 131 wherein said plurality of split-into-multiple source fields are displayed to a user.

133. (new) The computer program product of claim 131 wherein said set of source values of said plurality of split-into-multiple source fields are displayed to a user.



Appl. No. 10/022,056

134. (new) The computer program product of claim 91 wherein said computer program is configured to extract data values from descriptive fields by identifying said data values within said descriptive fields, parsing said data values from said descriptive fields, and populating said at least one new source field with said data values.
135. (new) The computer program product of claim 91 wherein said transformation data comprises measurement information and said computer program uses said measurement information to execute a means for normalizing units of measure within said set of source fields.
136. (new) The computer program product of claim 135 wherein said measurement information is displayed to a user
137. (new) The computer program product of claim 135 wherein said means for normalizing further comprises combining numeric value and said unit of measure from a plurality of source fields.
138. (new) The computer program product of claim 91 wherein at least one of said set of source values within said set of source fields comprises an improperly formed measurement value comprising a numeric value and a unit of measure.
139. (new) The computer program product of claim 138 wherein said unit of measure comprises an implicit unit of measure associated with said set of source values .

Appl. No. 10/022,056

140. (new) The computer program product of claim 138 wherein said unit of measure comprises inconsistent string values.

141. (new) The computer program product of claim 138 wherein said units of measure differ within a plurality of said values within each of said set of source fields.

142. (new) The computer program product of claim 138 wherein computer program is further configured to append said unit of measure to set of source values missing said unit of measure.

143. (new) The computer program product of claim 91 wherein said source data structure comprises a plurality of joined data sources.

144. (new) The computer program product of claim 91 wherein said transformation data comprises matching information and said computer program is configured to use said matching information to execute a means for matching said set of source records to said destination records.

145. (new) The computer program product of claim 144 wherein said matching information comprises record-level information identifying said correlation between at least one of said set of source records and at least one of said destination records.

Appl. No. 10/022,056

146. (new) The computer program product of claim 144 wherein said matching information is displayed to a user.

147. (new) The computer program product of claim 144 wherein said matching information indicates a new destination record is to be created with at least one of said set of source values from one of said set of source fields from one of said set of source records.

148. (new) The computer program product of claim 144 wherein said matching information indicates at least one of said destination fields in at least one of said destination records is to be updated with at least one of said set of source values from one of said set of source fields.

149. (new) The computer program product of claim 144 wherein said matching information indicates at least one destination record is to be replaced with at least one of said set of source records.

150. (new) The computer program product of claim 91 wherein said computer program is further configured to transform said set of source values in accordance with said transformation data.

151. (new) The computer program product of claim 150 wherein said transformed set of source values are displayed to a user.

Appl. No. 10/022,056

152. (new) The computer program product of claim 91 wherein said computer program comprises an integrated interface for obtaining said transformation data.
153. (new) The computer program product of claim 152 wherein said source data structure is represented within said integrated interface as a hierarchy.
154. (new) The computer program product of claim 153 wherein said hierarchy comprises a visual representation of said set of source tables.
155. (new) The computer program product of claim 153 wherein said hierarchy comprises a visual representation of said set of source fields.
156. (new) The computer program product of claim 153 wherein said hierarchy comprises a visual representation of said source table relationships.
157. (new) The computer program product of claim 156 wherein a user can define additional relationships between said set of source tables.
158. (new) The computer program product of claim 153 wherein said hierarchy comprises a visual representation of said source data values.
159. (new) The computer program product of claim 152 wherein said destination data structure is represented within said integrated interface as a hierarchy.

Appl. No. 10/022,056

160. (new) The computer program product of claim 159 wherein said hierarchy comprises a visual representation of said destination tables.

161. (new) The computer program product of claim 159 wherein said hierarchy comprises a visual representation of said destination fields.

162. (new) The computer program product of claim 159 wherein said hierarchy comprises a visual representation of said destination table relationships.

163. (new) The computer program product of claim 159 wherein said hierarchy comprises a visual representation of said destination data values.

164. (new) The computer program product of claim 91 wherein said computer program comprises a means for handling exceptions a source field at a time.

165. (new) The computer program product of claim 91 wherein said computer program is configured to collapse said set of source values within said set of source records down to a set of distinct values within said set of source records.

166. (new) The computer program product of claim 165 wherein said set of distinct values is configured to act as a proxy for said set of source values.

Appl. No. 10/022,056

167. (new) The computer program product of claim 165 wherein each distinct value within said set of distinct values is configured to act as a proxy for all instances of said distinct value across said set of source records.

168. (new) The computer program product of claim 165 wherein said transformation data is applied to said set of distinct values.

169. (new) The computer program product of claim 165 wherein said transformation data is applied once to each distinct value rather than once for each instance of said distinct value, and is automatically propagated to each instance of said distinct value.

170. (new) A computer program product comprising:

a computer-useable medium having a computer program for transforming a source structure to a destination data structure embodied therein, said computer program configured to:

obtain a source data structure;

obtain transformation data comprising information associated with said source data structure;

collapse said set of source values within said set of source records down to a set of distinct values within said set of source records;

process said source data structure by field-at-a-time handling of said set of source values;

apply said transformation data to said set of distinct values;

transform said source data structure into said destination data structure.

Appl. No. 10/022,056

171. (new) The computer program product of claim 170 wherein said source data structure comprises a structured document.

172. (new) The computer program product of claim 170 wherein said destination data structure comprises a structured document.

173. (new) An apparatus for transforming data comprising:

a processor;

a memory medium coupled to said processor;

said memory medium containing a computer program configured to present a graphical user interface comprising:

a first region comprising a source hierarchy representing a source data structure;

said computer program configured to access said first region and process said source data structure by field-at-a-time handling of a set of source fields associated with said source data structure;

a second region comprising a destination hierarchy representing a destination data structure;

a third region configured to obtain transformation data associated with said source data structure and destination data structure.

174. (new) The apparatus of claim 173 wherein said transformation data comprises partitioning information.

Appl. No. 10/022,056

175. (new) The apparatus of claim 173 wherein said transformation data comprises field-level mapping information.

176. (new) The apparatus of claim 173 wherein said transformation data comprises value-level mapping information.

177. (new) The apparatus of claim 173 wherein said transformation data comprises matching information.

178. (new) The apparatus of claim 173 wherein said transformation data comprises type conversion information.

179. (new) The apparatus of claim 173 wherein said transformation data comprises parsing information.

180. (new) A computer program product comprising:  
a computer-usable medium having a computer program for transforming a source structure to a destination data structure embodied therein, said computer program configured to:  
obtain said source data structure;  
obtain transformation data comprising information associated with said source data structure;  
collapse said set of source values within said set of source records down to a set of distinct values within said set of source records wherein each distinct value within said set of



Appl. No. 10/022,056

distinct values is configured to act as a proxy for instances of said distinct value across  
said set of source records;

process said source data structure by field-at-a-time handling of said set of source values;

apply said transformation data to said set of distinct values;

transform said source data structure into said destination data structure.